

CLAIMS:

1. An optical head device characterized in that the device comprises:

a light source;

5 an objective lens for converging outgoing light from the light source on an optical recording medium;

a phase correcting element provided between the light source and the objective lens to change a wave front of the outgoing light, the phase correcting element

10 including an anisotropic optical medium sandwiched between a pair of substrates, at least one of the substrates being transparent, the paired substrates having surfaces provided with electrodes for voltage application to the anisotropic optical medium, the

15 electrode on at least one of the substrates having a plurality of power supply electrodes provided thereon at different positions, thereby providing different voltages to the plural power supply electrodes; and

a control voltage generator for outputting a voltage 20 for changing the wave front to the phase correcting element.

2. An optical head device characterized in that the device comprises:

a light source;

25 an objective lens for converging outgoing light from the light source on an optical recording medium;

a phase correcting element provided between the light

source and the objective lens to change a wave front of the outgoing light, the phase correcting element including an anisotropic optical medium sandwiched between a pair of substrates, the paired substrates 5 having respective opposed surfaces provided with electrodes for voltage application to the anisotropic optical medium, the electrode on at least one of the substrates having a plurality of power supply electrodes provided thereon at different positions, not less than 10 two of the plural power supply electrodes being conductively connected together through a thin film resistor comprising a conductive thin film; and a control voltage generator for outputting a voltage for changing the wave front to the phase correcting 15 element.

3. The optical head device according to Claim 2, wherein a electrode with the power supply electrodes provided thereon is divided into a plurality of divided electrodes, the respective divided electrodes have more 20 than one power supply electrode provided thereon, and not less than two of the power supply electrodes are conductively connected together through the thin film resistor.

4. The optical head device according to Claim 1, 2 or 3, 25 wherein the plural power supply electrodes are annular members and are concentrically provided each other, either one of the annular members has a radius ratio of

0.65 - 0.85 to luminous flux of the outgoing light starting from the light source and passing through the phase correcting element, and another annular member different from the annular member has a radius ratio of 5 0.2 - 0.4 to the luminous flux.

5. The optical head device according to one of Claims 1-4, wherein only one of the paired substrates is a transparent substrate.

6. The optical head device according to one of Claims 10 1-5, wherein the anisotropic optical medium is a liquid crystal.

7. The optical head device according to one of Claims 1-6, wherein an electrode material forming the electrodes with the power supply electrodes has a sheet resistance 15 of not less than $100 \Omega/\square$.

8. The optical head device according to one of Claims 2-7, wherein all thin film resistors have a value of resistance in a range from 100Ω to $1000 k\Omega$.

9. The optical head device according to one of Claims 20 1-8, wherein each electrode material forming the electrodes has a sheet resistance of not less than 1000 times a sheet resistance of a power supply electrode material forming the power supply electrodes.

10. The optical head device according to Claim 7 or 9, 25 wherein the electrode material comprises a zinc oxide layer with gallium added thereto or a zinc oxide layer with gallium and silicon added thereto.